

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

HYDRO-PHOTON, INC.,
a Maine Corporation

Plaintiff,

v.

MERIDIAN DESIGN, INC., a California
Corporation

Defendant.

Civil Action No. 05-11240 GAO

PLAINTIFF HYDRO-PHOTON, INC.’S REQUEST FOR RECONSIDERATION

I. INTRODUCTION

Plaintiff, Hydro-Photon, Inc. (“Hydro-Photon”), pursuant to Fed.R.Civ.P. 59(e), respectfully requests reconsideration of that part of the Memorandum and Order dated January 18, 2007 (the “Order”) that construes the “control means” limitation of claim 7 of U.S. Patent No. 6,110,424 (the “‘424 patent”) to include a liquid-level sensor.

Hydro-Photon respectfully submits that reconsideration of that part of the Order is appropriate because it appears from the Order that the Court has mischaracterized Hydro-Photon’s argument with respect to the proper construction of the “control means” limitation, and improperly equated the liquid level sensor 20 with the switches that the ‘424 patent teaches to be located between the power source and lamp 12 in the water purification system disclosed and claimed in the ‘424 patent. Reconsideration is also appropriate because the Court appears to have given no weight to the ‘424 patent’s teaching that the liquid level sensor performs a function that is different from that recited in the “control means” limitation, or to the prosecution history of the patent, both of which clearly support the construction of “control means” proffered by Hydro-Photon.

II. ARGUMENT

A. **The Court Has Mischaracterized Hydro-Photon's Position Regarding the Corresponding Structure For the Control Means**

In two occurrences in its Order, the Court mischaracterizes Hydro-Photon's position regarding the corresponding structure for the "control means" limitation. At one point, the Court states that "Hydro-Photon attempts to limit the corresponding structure only to the first 'on-off' switch." Order, p. 6. At another point, the Court states that "Hydro-Photon characterizes one set of switches as enabling, and the other as performing, the function of turning on the light source." Order, p. 5, n. 2.

To the contrary, Hydro-Photon has consistently since the early stages of this litigation, and throughout the proceedings on the parties' cross motions regarding infringement, taken the position that the corresponding structure for the "control means" is the on-off switch 28 **and** the switches between the power source (e.g. the ballast circuitry 13 and battery 14) and the lamp 12." See Plaintiff's Statement of Claim Terms Likely To Be In Dispute And Its Proposed Construction Of the Same (Docket Entry No. 13), p. 10 ("Corresponding Structure: "on-off switch 28 **and** switches (not shown) that connect and disconnect the source of power (e.g., the ballast circuitry 13 and battery 14) and the lamp 12") (emphasis added); see also Plaintiff Hydro-Photon, Inc.'s Memorandum In Opposition to Defendant Meridian Design, Inc.'s Motion for Summary Judgment of Non-Infringement, and in Support of Plaintiff's Cross-Motion for Partial Summary Judgment of Infringement (Docket Entry No. 21) ("Plaintiff's Memo."), p. 5 ("[t]he only structures disclosed in the specification of the '424 patent that actually perform the agreed-upon function of turning the light source on and off are the on-off switch 28 **and** switches that

the specification of the '424 patent indicates connect and disconnect the power source (e.g., the ballast circuitry 13 and battery 14) and the lamp 12.”) (emphasis added).

Hydro-Photon agrees with the Court that, “[a]ccording to the specification, the circuit for the light source current is controlled by two sets of switches.” See Order, p. 5. The two sets of switches turn the light source on and off. Hydro-Photon never argued that one of the sets of switches “enabled,” while the other “performed,” the function of turning the light source on and off. To the contrary, Hydro-Photon has consistently argued that liquid-level sensor “enabled” or “allowed” the switches between the power source and the lamp 12 to close when water is sensed, but that those switches, together with the on-off switch 28, are the only structures that, using the Court’s terminology, actually make and break “the circuit for the light source current.” In other words, the switches are the only structures that turn the light source on and off.

B. The Court Appears Erroneously to Equate the Liquid-Level Sensor With the Set of Switches Between the Power Source and the Lamp 12.

In its Order, the Court points out that “[i]t should be noted that although there are two distinct switches, there is no necessary order in which the switches must be operated ... The on-off switch 28 can be set to the ‘on’ position either before or after the wand is submerged in water. In either sequence, **both the switch and the water level sensor must effectively be ‘on’ before the light will light.**” Order, p. 5, n. 2 (emphasis added).

This remark, together with the Court’s comment that “Hydro-Photon characterizes one set of switches as enabling,”¹ suggest that the Court has erroneously equated the liquid level sensor with the switches between the power source and the lamp 12 which the liquid level sensor enables. Although the liquid level sensor is “connected” to the switches between the power

¹ Hydro-Photon in fact characterized the liquid-level sensor as “enabling” the switches.

source and the lamp 12, it is a separate and distinct electrical component from those switches.

The specification of the ‘424 patent makes this clear:

“a liquid-level sensor 20, which is connected to switches (not shown) between the lamp 12, and the ballast circuitry 13 and battery 14, prevents the UV lamp from turning on until it is fully immersed in the water.”

‘424 patent., col. 2, ll. 45-48 (emphasis added).

The sensor 20 may, for example, be a capacitive-type sensor that senses the difference in capacitance of the water and the surrounding air. When the sensor determines that it is in water, which necessarily means that the lamp is immersed in the water, **the sensor closes the switches** and allows the lamp to be turned on.

Id., col. 2, ll. 55-60 (emphasis added).

The user turns the system 10 on by moving the on-off switch 28 to the appropriate position. When the liquid-level sensor 20 determines that the lamp is fully immersed in the water, **the sensor closes the switches (not shown) that separate the ballast circuitry 13 and the battery 14 (Fig. 1) from the lamp 12 and the lamp turns on. The sensor also starts the timing circuit 22 that keeps the lamp lit for a predetermined time.**

Id., patent, col. 3, ll. 20-27 (emphasis added).

Again, it is the switches that turn the light source on and off. Just like the timing circuit 22², which the Court agrees is not part of the structure that actually turns the light source off, the liquid level sensor is not part of the structure that actually turns the light source on. If the liquid-level sensor were removed from the system, the structures necessary to turn the light source on and off, namely, the two sets of switches, would still be present in the circuit and would still function to turn the light source on and off. In fact, it is a routine matter to remove the liquid-

² The ‘424 patent teaches that timing circuit 22 “turns the light source off a predetermined time after the [liquid-level] sensor allows the light source to turn on.” ‘424 patent, claim 9, col. 4, ll. 42-44.

level sensor, timing circuit and associated electronics from the circuitry for the system disclosed in the ‘424 patent, so that the lamp 12 is turned on and off simply and directly through the use of the on-off switch 28. Neither the liquid-level sensor nor the timing circuit is necessary to turn the light source on or off.

C. The Court Appears to Give No Weight to the Fact That Claim 8 and Other Parts of the ‘424 Patent Specification Clearly Teach That the Liquid Level Sensor Performs a Function That Is Different From That Recited In the “Control Means” Limitation

Claim 8 of the ‘424 patent states that the liquid-level sensor “prevents the light source from turning on until the light source is immersed in water.” ‘424 patent, claim 8, col. 4, ll. 39-41. Other parts of the ‘424 patent specification confirm this. See ‘424 patent, col. 3, ll. 6-8 (“[t]he sensor prevents the lamp from turning on until the lamp is fully immersed in the water.”); col. 3, ll. 44-47 (“liquid-level sensor 20 ... prevents the UV lamp from turning on until it is fully immersed in water.”). The Court agrees that the function of the “control means” is turning the light source on and off. Order, p. 5. Preventing the light source from turning on until it is immersed in water is different from turning the light source on. The specification of the ‘424 patent, including particularly claim 8, thus fail to “clearly link or associate” the liquid-level sensor with the recited function of the “control means.” This failure to link supports Hydro-Photon’s argument that the liquid-level sensor is not part of the corresponding structure. *B. Braun Med., Inc. v. Abbott Labs*, 124 F.3d 1419, 1424 (Fed. Cir. 1997).

It is unfortunate that, during the course of the briefing on the parties’ motions, this argument was denoted as a “claim differentiation” argument. In actuality, it is not. It is an argument that the specification of the ‘424 patent fails to clearly link the function of the liquid-level sensor with the recited “control means” function. In fact, the only structures clearly linked

to the “control means” function of turning the light source on and off are the two sets of switches.

Hydro-Photon agrees with the Court’s analysis of *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303 (Fed. Cir. 2001) and *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533 (Fed. Cir. 1991), to the extent that it deals with claim differentiation. It is important to note, however, that both cases actually support Hydro-Photon’s position in their discussion of the need for corresponding structure to be clearly linked to the function that is recited in a means-plus-function claim limitation.

In *Medtronic*, the issue was whether the corresponding structures for a “means for connecting adjacent elements together” limitation in claim 11 of the patent-in-suit directed to a stent included only helical windings or both helical windings and straight wires, hooks and sutures. The Court found that the corresponding structure included only the helical windings because they were the only structures which the specification of the patent clearly linked to the function of “connecting adjacent elements together.” 248 F.3d at 1309-10. While the Court agreed that the straight wires, hooks and sutures were physically connected to the coils, the Court found that the straight wires, hooks and sutures were characterized in the patent specification as performing a different function than the recited function, namely, they performed the function of preventing longitudinal overstretch of the stent. *Id.* at 1313-14.

Similarly, in the ‘424 patent, while the liquid level sensor is physically connected to the switches between the lamp and the ballast circuitry and battery, the liquid level sensor performs a different function than the switches, namely, the liquid level sensor performs the function of *preventing* the closing of the switches until the light source is immersed in water. Thus, like the straight wires, hooks and sutures in *Medtronic*, the liquid level sensor of the ‘424 patent is a

safety feature component³ that is added to a system that otherwise, that is, without the component, performs the recited function of the “control means.”

In *Laitram*, the issue was whether the corresponding structure for a “means for joining said pluralities to one another so that the axes of said holes of said first plurality are arranged coaxially, **the axes of said holes of said second plurality are arranged coaxially and the axes of respective holes of both pluralities of link ends are substantially parallel**” in independent claim 21 of the patent-in-suit included cross members as recited in dependent claim 24 (emphasis added). The Court concluded that the cross members were part of the corresponding structure of the “means for joining” limitation, even though they were recited in the dependent claim. The Court, quoting directly from the specification of the patent-in-suit, emphasized that the cross-members performed the very function recited in the “means for joining” limitation, i.e., “the cross members 24 functioned to maintain the link-like elements in parallel relation so that the surfaces of end sections 21 are kept *parallel and pivot holes 26 aligned...*” 939 F.2d at 1336 (emphasis added).

As described in the ‘424 patent, the liquid level sensor prevents the switches between the battery and ballast and the lamp from closing until the sensor determines that the light source is immersed in the water. This function is different from the function recited in the “control means” limitation, i.e., turning the light source on and off. Consequently, the liquid-level sensor is not part of the corresponding structure of the “control means.”

³ Unlike an underwater flashlight which emits harmless wavelengths of light, the germicidal wavelengths of ultraviolet light used in portable water purifiers are potentially hazardous if used outside of water. Hydro-Photon includes a liquid sensor as a safety precaution to help protect the users of the products from potential harm; not to operate the lamp.

D. The Court Appears To Have Given No Weight To The Prosecution History Of The ‘424 Patent Which Confirms That Hydro-Photon Characterized The Control Means As Not Including the Liquid-Level Sensor

Claim construction requires that disputed claim language be viewed in the context of “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc). The most relevant source is the patent specification. *Id.* at 1315. Next in importance is the prosecution history, which is also part of the “intrinsic evidence” that directly reflects how the patentee has characterized the invention. *Id.* at 1317. Thus, a court should also consider the patent’s prosecution history, if it is in evidence. *Id.* Relevant excerpts of the prosecution history of the ‘424 patent were submitted with Plaintiff’s Memo. See Declaration of Kevin Gannon In Support of Hydro-Photon’s Cross Motion for Summary Judgment (Docket Entry No. 23) (“Gannon Dec.”), Exhibits A-F. These excerpts clearly show that Hydro-Photon has consistently characterized the “control means” as not including or requiring a liquid level sensor.

Specifically, the prosecution history shows that Hydro-Photon filed the continuation application from which the ‘424 patent issued specifically to obtain a broad claim to its water purification system that did not require a liquid-level sensor. The broadest claims in the parent to the ‘424 patent application as originally filed, were not limited to a system that included or required a liquid-level sensor. Throughout the prosecution of the parent application, Hydro-Photon made it clear that the liquid-level sensor was an optional component in the system:

“A liquid level sensor **may** be included in the system, to prevent the lamp from turning on before it is fully immersed in the water.”

Amendment in the ’750 application dated July 17, 1997, p. 5 (Gannon Dec. Exh. B, p. 5) (emphasis added).

“As discussed during the interview, the inventive system includes, **in the preferred embodiment**, a mechanism that prevents the ultraviolet light source from turning on until the light source is fully immersed in the water.”

Amendment in the '750 application dated November 18, 1997, p. 6 (Gannon Dec. Exh. C, p. 6) (emphasis added).

After a final rejection in the parent application, Hydro-Photon amended the broadest claim to add the liquid-level sensor simply to obtain an allowance of the then-pending claims. Amendment After Final Rejection dated December 4, 1998, p. 2 (Gannon Dec., Exh. D, p. 2). At the time, Hydro-Photon made it clear that it believed that the broadest claim was patentable without the liquid-level sensor limitation (*Id.* at p. 4) and that it intended to file a continuation application to seek claim coverage that did not require the liquid level sensor as part of the broadest claim:

“However, **we disagree that the subject matter of claim 1, without amendment, is obvious over the previously and newly cited prior art.** Accordingly, we make the proposed amendment set forth above to move the application to allowance, and **we intend to file a continuation application to seek broader claims.**”

Amendment After Final Rejection dated December 4, 1998 p. 4. (Gannon Dec. Exh. D, p. 4) (emphasis added).

Hydro-Photon then filed the continuation application from which the '424 patent issued, again without the liquid level sensor being included as a limitation in the broadest claim. In response to a first action rejection of the claim based on U.S. Patent No. 5,276,256 to Karamian, Hydro-Photon again made it clear that it did not consider the liquid-level sensor to be a required limitation:

“**We disagree that the invention set forth in claims 1, 5 and 7 is obvious in light of United States Patent 5,276,256 to Karamian.**”

Amendment in the '054 application dated June 23, 1999, p. 3 (Gannon Dec. Exh. E, p. 3) (emphasis added).

Claim 11 in the application, which became claim 7 in the issued '424 patent, was added at the time of these remarks without reciting the liquid-level sensor as a limitation. Claim 12, which became claim 8 in the '424 patent, was also added, to expressly recite the liquid level sensor as a limitation. The PTO Examiner then allowed claim 11, capitulating in Hydro-Photon's position that the liquid-level sensor was not a required element.

The prosecution history of the '424 patent, which is in evidence, thus clearly shows that Hydro-Photon repeatedly characterized its invention as one that did not require a liquid-level sensor. It clearly confirms that Hydro-Photon's construction of the "control means" limitation is the correct one.

III. CONCLUSION

For the foregoing reasons, Hydro-Photon respectfully submits that reconsideration of the Court's construction of "control means" is appropriate, and requests that, upon reconsideration, the term be construed so as not to include or require a liquid level sensor.

Hydro-Photon, Inc.
By its attorneys,

Dated: January 29, 2007

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CERTIFICATE OF SERVICE

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